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PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Certificate

Patent Number

: 6,734,341 B2

JUN 3 0 2004

Issued

: May 11, 2004

Of Correction

Name of Patentee

Pioneer Hi-Bred International, Inc.

Title of Invention

Starch Synthase Polynucleotides and Their Use in the

Production of New Starches

Attn: Certificate of Correction Branch Commissioner for Patents

P.O. Box 1450

Alexandria, VA 22313-1450

REQUEST FOR CERTIFICATE OF CORRECTION OF PATENT FOR PTO MISTAKE (37 CFR 1.322(a))

- 1. Attached, in duplicate, is Form PTO/SB/44, with at least one copy being suitable for printing.
- 2. The exact page and line number where the errors are shown correctly in the application file are:

Page 1, Line 17:

Serial No. 09/388,743 filed September 2, 1999, the disclosure of which is incorporated herein by reference. A copy of the first page of the specification is enclosed for the convenience of the Office.

Information Disclosure Statement by Applicant, Sheet 1, Cite No. A3 and Sheet 2, Cite No. A7, A8 and A9 filed 10/02/2003. A copy of the IDS is enclosed for the convenience of the Office.

Patent No. 6,734,341 B2 Attorney Docket No. 1144D

3. Please send the Certificate to:

Name

Kathryn K. Lappegard

Address:

Pioneer Hi-Bred International, Inc.

Corporate Intellectual Property

7100 N.W. 62nd Avenue

P.O. Box 1000

Johnston, Iowa 50131-1000

Respectfully submitted,

Kathryn K. Lappegard Agent for Applicant(s)

Registration No. 46,857

PIONEER HI-BRED INTERNATIONAL, INC. Corporate Intellectual Property 7100 N.W. 62nd Avenue P.O. Box 1000 Johnston, Iowa 50131-1000 Phone: (515) 253-5707

Phone: (515) 253-5707 Facsimile: (515) 334-6883

George W. Singletary

Lan Zhou

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TECHNICAL FIELD

The present invention relates generally to plant molecular biology. More specifically, it relates to nucleic acids and methods for modulating their expression in plants.

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CROSS-REFERENCE TO RELATED APPLICATIONS

This application claims priority under 35 USC 120 to U.S. Patent Application Serial No. 09/388,743 filed September 2, 1999, the disclosure of which is incorporated herein by reference.

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BACKGROUND OF THE INVENTION

Starches are polymers of glucose molecules produced and stored only in the chloroplasts and amyloplasts of plants. Most of the starch produced in the world is used as food, but about one-third of the total production is employed for a variety of industrial purposes that take advantage of starch's unique properties. These properties (e.g. viscosity, gelatinization temperature) vary greatly with the plant source and affect the usefulness of the starch for food and nonfood products. (Sivak and Preiss, *Advances in Food and Nutrition Research*, Vol. 41. Academic Press, 1998, p. 163.) The properties of a starch are determined by the structure of its constituent granules and the polymers from which the granules are formed. Molecular structure is, in turn, dependent largely upon the presence and activity of specific isozymes of starch synthase. Genes encoding the starch synthase enzymes are therefore of interest.

Approved for use through 07/31/2006, OMB 0651-0031
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE
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Substitute for for 1449A/PTO INFORMATION DISCLOSURE STATEMENT BY APPLICANT

of

Complete if Known Application Number 10/044.543 Filing Date 01/11/2002 First Named Inventor George W. Singletary Art Unit 1638 Examiner Name Fox, David T. Attorney Docket Number 1144D

(Use as many sheets as necessary)

Sheet

U.S. PATENT DOCUMENTS						
Examiner Initials *	Cite	Document Number	Publication Date	Name of Patentee or Applicant of	Pages, Columns, Lines, Where Relevan	
	No.1	Number - Kind Code ² (if known)	MM-DD-YYYY	Cited Document	Passages or Relevant Figures Appear	
	A1	US- 5,824,790	10/20/1998	Keeling et al.	Whole Document	
	A6	US- 6,130,367	10/10/2000	Kossmann et al.	Whole Document	
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FOREIGN PATENT DOCUMENTS						
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Examiner Initials*		Country Code ³ - Number ⁴ - Kind Code ⁵ (<i>if known</i>)	Publication Date MM-DD-YYYY		Lines, Where Relevant Passages or Relevant Figures Appear	T ⁶
	A2	WO 97/20936	06/12/1997	Zeneca Limited	Whole Document	
	А3	WO 97/26362	07/24/1997	Plant-Tec Biotechnologie GmbH	Whole Document	
	A4	WO 97/45545	12/04/1997	Hoechst Schering AgrEvo GmbH	Whole Document	
	A5	CA 2,205,118	05/23/1996	Hoechst Schering AgrEvo GmbH	Whole Document	

Examiner Signature	Date Considered	

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This collection of information is required by 37 CFR 1.97 and 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 2 hours to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

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INFORMATION DISCLOSURE STATEMENT BY APPLICANT

(Use as many sheets as necessary)

of

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Complete if Known			
Application Number	10/044,543		
Filing Date	01/11/2002	-	
First Named Inventor	George W. Singletary		
Art Unit	1638		
Examiner Name	Fox, David T.		
Attorney Docket Number	1144D		

NON PATENT LITERATURE DOCUMENTS				
Examiner Initials *	Cite No. ¹	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T²	
	A7	Nakatani et al., Relationship between Starch Content and Activity of Starch Synthase and ADP-glucose Phrophosphorylase in Tuberous Root of Sweet Potato, Jpn. J. Crop Sci., 1992, 61(3)463-468		
	A8	Salehuzzaman et al., Isolation and characterization of a cDNA encoding granule-bound starch synthase in cassava (Manihot esculenta Crantz) and its antisense expression in potato, Plant Mol. Biol., 1993, 23:947-962		
*****	A9	Dry et al., Characterization of cDNAs encoding two isoforms of granule-bound starch synthase which show differential expression in developing storage organs of pea and potato, The Plant Journal, 1992, 2(2):193-202		

Examiner	Date	
Signature	Considered	

^{*}EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

and not considered. Include copy of this form with next communication to applicant.

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(Also Form PTO-1050)

UNITED STATES PATENT AND TRADEMARK OFFICE CERTIFICATE OF CORRECTION

PATENT NO: 6,734,341 B2

DATED: May 11, 2004

INVENTOR(S): George W. Singletary, Lan Zhou

It is certified that error appears in the above-identified patent and that said Letters Patent are hereby corrected as shown below:

Title Page, Item (62), Related U.S. Application Data, should read as follows:

-- Division of application No. 09/388,743, filed on Sep. 2, 1999, now Pat. No. 6,423.886. --

Title Page, Item (56), References Cited, Foreign Patent Documents, should read as follows:

-- WO WO 97/26362 7/1997 --

Title Page, Item (56), References Cited, OTHER PUBLICATIONS, Nakatani et al. reference should read as follows:

-- Relationship between Starch Content and Activity of Starch Synthase and ADP-glucose Phrophosphorylase in Tuberous Root of Sweet Potato, Jpn. J. Crop Sci., 1992, 61(3)463-468. --

Title Page, Item (56), References Cited, OTHER PUBLICATIONS, Salehuzzaman et al. reference should read as follows:

-- Isolation and characterization of a cDNA encoding granule-bound starch synthase in cassava (Manihot esculenta Crantz) and its antisense expression in potato, Plant Mol. Biol, 1993, 23:947-962. --

Title Page, Item (56), References Cited, OTHER PUBLICATIONS, Dry et al. reference should read as follows:

-- Characterization of cDNAs encoding two isoforms of granule-bound starch synthase which show differential expression in developing storage organs of pea and potato, The Plant Journal, 1992, 2(2):193-202. --

MAILING ADDRESS OF SENDER:

Pioneer Hi-Bred International, Inc. 7100 N.W. 62nd Avenue P.O. Box 1000 Johnston, IA 50131-1000

PATENT NO. 6,734,341 B2

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Page 1 of 1

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Kathryn K. Lappegard

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